

## Patent claims

1. Starting unit (1, 1.2, 1.3, 1.4, 1.5, 1.6)
  - 1.1 with an input (E) which can be connected to a drive and an output (A) which can be connected to a load;
  - 1.2 with a starting element (4, 4.3, 4.4, 4.5, 4.6) in the form of a hydrodynamic component (5, 5.2, 5.3, 5.4, 5.5, 5.6), comprising a primary impeller (6, 6.2, 6.3, 6.4, 6.5, 6.6) and a secondary impeller (7, 7.2, 7.3, 7.4, 7.5, 7.6) which together form a working compartment (8, 8.2, 8.3, 8.4, 8.5, 8.6) which can be filled with working fluid;
  - 1.3 with a switchable clutch (8) comprising at least two clutch elements which can be brought into a working frictional connection with one another directly or indirectly through additional transmission means -- a first clutch element (12) and a second clutch element (13) - which are connected with the input (E) and the output (A) at least indirectly in a rotationally fixed manner and which are actuated by means of an actuation system (15, 38);
  - 1.4 with a housing (17, 18) enclosing at least one impeller (7, 8) in the axial direction forming at least one working fluid guide channel or chamber (19) and connected to the primary impeller (6) in a static or rotationally fixed manner;
  - 1.5 the actuation system 915, 38) of switchable clutch (9) being at least indirectly connected to the working fluid guide channel or chamber (19) as a pressure source, whereby the working fluid guide channel or chamber (19) can be connected at least indirectly to a working fluid inlet channel (20);  
characterized by the following features:
  - 1.6 with means (2) to influence the transmission ratio of the hydrodynamic component (5);
  - 1.7 the means (2) comprising pressure medium actuated integrated mechanical components (3) which act least indirectly on the working circulation in the working compartment (8, 8.2, 8.3, 8.4, 8.5, 8.6);
  - 1.8 the pressure medium actuated integrated mechanical components (3) being impinged upon by pressure medium from the inlet channel (2) or the first working fluid guide channel or chamber (19), whereby the position of the pressure medium actuated integrated mechanical components (3) relative to the working compartment (8) is a function of the differential pressure between the pressure medium diverted from the

inlet channel (20) or the first working fluid guide channel or chamber (19) and the pressure in the interior of the housing (17, 18) in the area of the actuation system (26, 31).

2. Starting unit (1, 1.2, 1.3, 1.4, 1.5, 1.6) according to Claim 1, characterized by the fact that the pressure medium actuated integrated mechanical components (3) take effect on an arbitrary diameter between the inner diameter and the outer diameter of the working compartment (8, 8.2, 8.3, 8.4, 8.5, 8.6).
3. Starting unit (1, 1.2, 1.3, 1.4, 1.5, 1.6) according to one of Claims 1 or 2, characterized by the fact that the pressure medium actuated integrated mechanical components (3) are guided either along the housing (17, 18) and/or along one of the two impellers – primary impeller (6, 6.2, 6.3, 6.4, 6.5, 6.6) or secondary impeller (7, 7.2, 7.3, 7.4, 7.5, 7.6).
4. Starting unit (1, 1.2, 1.4, 1.6) according to one of Claims 1 through 3, characterized by the fact that the actuation systems (31, 45) of the individual integrated mechanical components are fastened to the housing (17, 18) connected to the primary impeller (6, 6.2, 6.4, 6.6) in a static or rotationally fixed manner.
5. Starting unit (1, 1.3, 1.5) according to one of Claims 1 through 3, characterized by the fact that the actuation system (31, 59) of the individual integrated mechanical components (3) are located at the actuation system (15, 38) of the switchable coupling and are at least partially formed by it.
6. Starting unit (1, 1.2, 1.3, 1.4, 1.5, 1.6) according to one of Claims 4 or 5, characterized by the fact that the actuation system (31, 38, 45, 59) comprises a cylinder-piston unit (46, 54, 58), whereby the piston (34, 47) is connected to the integrated mechanical components (3).
7. Starting unit (1, 1.2, 1.3, 1.4, 1.5, 1.6) according to Claim 6, characterized by the fact that the cylinder (38, 48) is formed by the wall of the housing (17, 18) or a separate integrated part in the housing (17, 18) or in the wall, particularly in the piston (55) of actuation system (15, 38) of the switchable clutch (9).

8. Starting unit (1, 1.2, 1.3, 1.4, 1.5, 1.6) according to one of Claims 1 through 7, characterized by the fact that the pressure medium is guided to the actuation system (26, 45, 59) through at least one connecting line (25) at least indirectly connected to the working fluid inlet channel (20) and/or the working fluid guide channel or chamber (19).
9. Starting unit (1, 1.2, 1.3, 1.4, 1.5, 1.6) according to Claim 8, characterized by the fact that the connecting line (25) is led inside the housing (17, 18).
10. Starting unit (1, 1.2, 1.3, 1.4, 1.5, 1.6) according to one of Claims 8 or 9, characterized by the fact that the connecting line (25) is connected through an intermediate chamber (26, 62) between actuation system 915, 38) of switchable clutch (9) to the actuation system 26, 45, 59) of the integrated mechanical components (3).
11. Starting unit (1, 1.5) according to one of Claims 8 through 10, characterized by the fact that the connecting line (25) is connected with a line extending in the actuation system (15, 38) of the switchable clutch (9) or with a line connected to that.
12. Starting unit (1, 1.2, 1.3, 1.4, 1.5, 1.6) according to one of Claims 1 through 11, characterized by the fact that the pressure medium actuated integrated mechanical components (3) comprise a ring slide (27, 27.3) which can be moved in the axial direction and which is formed from at least a partially ring-shaped element extending in the circumferential direction.
13. Starting unit (1, 1.2, 1.3, 1.4, 1.5, 1.6) according to one of Claims 1 through 11, characterized by the fact that the pressure medium actuated integrated mechanical components (3) are formed from a bolt-shaped element (57) which can be moved in the axial direction.
14. Starting unit (1, 1.2, 1.3, 1.4, 1.5, 1.6) according to one of Claims 1 through 11, characterized by the fact that the integrated mechanical components are formed by a partial region of the wall of an impeller (7.5) which is used to guide the flow circulation.

15. Starting unit (1, 1.2, 1.4) according to one of Claims 1 through 14, characterized by the fact that the pressure medium actuated integrated mechanical components (3) are located on the primary impeller (6, 6.2, 6.4).
16. Starting unit (1, 1.3, 1.5) according to one of Claims 1 through 14, characterized by the fact that the pressure medium actuated integrated mechanical components (3) are located on the secondary impeller (7, 7.3, 7.5).
17. Starting unit (1; 1.2; 1.3; 1.4; 1.5) according to one of Claims 1 through 16, characterized by the fact that pressure medium actuated integrated mechanical components (3) can be introduced into the gap between the individual impellers (6, 7).